CLAIMS

1. A cell comprising at least part of the cytoplasm derived from an embryonal teratocarcinoma cell combined with a nucleus of a somatic cell.

2. A cell according to Claim 1 wherein said cell is a cybrid characterised by the possession of at least one pluripotential characteristic.

3. A cell according to Claim 2 characterised in that said pluripotential characteristic is the ability to differentiate into at least one selected tissue type.

4. A cell according to Claim 2 characterised in that said pluripotential characteristic includes the ability of said cell to proliferate in culture in an undifferentiated state.

5. A cell according to Claim 4 characterised in that said cell has the capacity to proliferate in continuous culture in an undifferentiated state for at least 6 months and ideally 12 months.

6. A cell according to any of Claims 2-5 characterised in that said pluripotential characteristic includes the expression of at least one selected marker.

7. A cell according to Claim 6 characterised in that said pluripotential characteristic is expression of Oct4.

8 A cell according to Claim 6 characterised in that said selected marker is a cell surface marker.

9 A cell according to Claim 8 characterised in that said cell surface marker is selected from the group including SSEA-1 (-); and/or SSEA-3 (+); and/or SSEA-4 (+); and/or TRA-1-60 (+); and/or TRA-1-81 (+); and/or alkaline phosphatase (+).

10 A cell according to any of Claims 2-9 characterised in that said pluripotential characteristic includes the presence of telomerase activity.

11. A cell according to any of Claims 2-10 characterised in that said pluripotential characteristic includes the presence of a chromosomal methylation pattern characteristic of pluripotential cells.

12. A cell according to any of Claims 2-11 characterised in that said pluripotential characteristic includes the ability to induce tumours when introduced into an animal.

~~13. A cell-line comprising cells according to any of Claims 1-12.~~

14. A cell-line according to Claim 12 characterised in that said cell-line is of human origin.

15. A method for the preparation of a cytoplasmic part for use in the production of a cell according to any of Claims 1-12 or a cell-line according to Claims 13 or 14 comprising;

(i) providing at least one embryonal teratocarcinoma cell;
(ii) separating at least part of the cytoplasm from the nucleus of said cell;
(iii) isolating said cytoplasmic part; and, optionally
(iv) storing said isolated cytoplasmic part prior to use.

16. A method according to Claim 15 characterised in that said cytoplasmic part is a cytoplast.

17. A method for preparing a cell according to any of Claims 1-12 or a cell-line according to Claims 13 or 14 comprising;

(i) combining at least one embryonal teratocarcinoma cell with at least one somatic cell;

(ii) removing the embryonal teratocarcinoma nucleus from said combined cell,

(iii) culturing said cell under conditions conducive to proliferation and expansion of said cell; and, optionally

(iv) storing said cell culture under suitable conditions.

Sub a5

18. A method of combining at least part of the cytoplasm of an embryonal teratocarcinoma cell with a somatic cell comprising;

(i) providing at least part of the cytoplasm of an embryonal teratocarcinoma cell;

(ii) combining said cytoplasmic part with at least one somatic cell;

(iii) growing said combined cell in culture; and, optionally

(iv) storing said combined cell under suitable storage conditions.

19. A method according to Claim 18 characterised in that said cytoplasmic part is provided as a cytoplast.

20. A method according to Claims 18 or 19 characterised in that said cytoplast is combined with said somatic cell via cytoplast/somatic cell fusion.

21. A method according to any of Claims 18-20 characterised in that said embryonal carcinoma cell and said somatic cell are of human origin.

22. A cell culture comprising at least one cell according to the invention.

Sub a6

23. A method ~~for inducting differentiation of at least one cell according to Claims 1-12~~ comprising:

(i) providing a cell according to any of Claims 1-12;

(ii) culturing said cell under conditions conducive to the differentiation of said cell into at least one tissue; and, optionally

(iii) storage of said differentiated tissue prior to use under suitable storage conditions.

24. A method according to Claim 23 characterised in that said culture conditions are selected so as to provide a tissue type selected from at least one of: neural, smooth muscle, striated muscle, cardiac muscle, bone, cartilage, liver, kidney, respiratory epithelium, haematopoietic cells, spleen, skin, stomach, intestine.

25. At least one tissue type or organ comprising at least one cell according to any of Claims 1-12.

26. A therapeutic composition comprising at least one cell according to any of Claims 1-12 and a suitable excipient, diluant or carrier.

27. A therapeutic composition according to Claim 26 for use in tissue transplantation.

28. A method to treat conditions or diseases requiring transplantation of tissue comprising:

(i) providing at least one tissue type or organ according to the invention;

(ii) surgically introducing said tissue type or organ to a patient to be treated; and

(iii) treating said patient under conditions which are conducive to the acceptance of said transplanted tissue by said patient.

29. A kit comprising at least one cell according to the invention; instructions with respect to the maintenance of said cell in culture; and, optionally, factors required to induce differentiation of said cell to at least one desired tissue type or organ.

add a87